IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

JAMES RODGERS, et al.,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	**Case No. 15-CV-129-CVE-PJC**
	)	
BEECHCRAFT CORPORATION, et al.,	)	
	)	
	)	
Defendants.	)	

REPORT AND RECOMMENDATION

Defendants' Motion to Limit and/or Exclude the Testimony of John Bloomfield ("Motion to Exclude") [Dkt. No. 52], is before the undersigned United States Magistrate Judge upon referral from the District Court for Report and Recommendation. [Dkt. No. 54]. The matter is fully briefed and a two-day hearing was conducted on September 7-8, 2016.

I
BACKGROUND

This lawsuit arises from the March 17, 2013, crash of a Beech Premier 390 aircraft en route from Tulsa, Oklahoma, to South Bend, Indiana. The plane was piloted by Wesley Caves ("Caves") and carried passengers Steve Davis, James Rodgers and Christopher Evans. On approach to South Bend, the aircraft experienced an inflight emergency created by the accidental shutdown of both engines. The pilot attempted to land at the South Bend Airport, but was advised by Air Traffic Control that the plane's main landing gear was not extended and that Caves should exercise a standard "go around"

to evaluate his landing gear extension options and make another attempt. Caves again made a second unsuccessful attempt to land, and the plane crashed just south of the South Bend airport. Caves and Steve Davis were killed. Passengers James Rodgers and Christopher Evans were seriously injured.

In this case, the surviving passengers and their spouses assert claims of negligence against Beechcraft Corporation ("Beechcraft") and Hawker Beechcraft Global Customer Support, LLC ("HGCS") and a products liability claim against Beechcraft.[1] The spouses, Sheryll Rodgers and Jill Evans, assert claims for loss of consortium against both Defendants. Plaintiffs seek compensatory and punitive damages. The Motion to Exclude concerns the testimony of Plaintiff's expert witness John Bloomfield ("Bloomfield"). It is, in effect, a *Daubert* motion challenging the sufficiency of Bloomfield's opinions, methodology and the data underlying his conclusions.

I will first address a preliminary matter: What consideration, if any, should be given to Bloomfield's Affidavit and supporting documentation which was submitted in response to the present motion. This material includes an 18-page Affidavit and more than 90 pages of exhibits explaining and bolstering Bloomfield's expert report and opinions. [Dkt. No. 116-1]. On July 29, 2016, Defendants moved to strike this material as "improper supplementation" of an expert report. [Dkt. No. 150]. The undersigned agreed with Defendants'

[1] On May 31, 2016, a companion case, *Regina S. Caves v. Beechcraft Corp., et al.*, No. 15-CV-125-CVE-PJC, was dismissed without prejudice. [*Id.*, at Dkt. Nos. 117 & 118].

motion to strike, and found that the "Supplemental Report" was improper under Fed. R. Civ. P. 26. [Dkt. Nos. 182 & 183]. The question remaining is: To what extent can this material be considered in support of Plaintiffs' Response to the pending motion? After a careful review of the Affidavit and supporting material, I conclude that no consideration will be given to it because it improperly revises and bolsters opinions that should have been fully formed when presented in Bloomfield's original expert report. To consider the material in the present context would simply allow Plaintiffs to end run the dictates of Rule 26 regarding supplementation of expert reports. Thus, Bloomfield's materials will be confined to his original expert report [Dkt. No. 52-6] and the deposition testimony supplied by the parties [Dkt. Nos. 52-9, 116-12 & 133-1].

II
APPLICABLE LEGAL PRINCIPLES

The Federal Rule of Evidence set parameters for the use of expert testimony:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed.R.Evid. 702.

When a party challenges an expert's testimony, the trial court must assess the validity of the testimony under the standards set forth in *Daubert v. Merrill Dow Pharm., Inc.*, 509 U.S. 579 (1993). The application of those standards was explained and expanded in subsequent cases. Most notably, in *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999), the Supreme Court made clear that the holding of *Daubert* is not confined to scientific expertise, but also applies where an expert relies "on skill- or experience-based observation." *Id.* at 151. Whether the factors and standards enunciated in *Daubert* are "reasonable measures of reliability in a particular case," is a matter left to the discretion of the trial court. *Id.* at 153.

Four nonexclusive, non-dispositive factors guide trial courts in their *Daubert* assessments of the reliability of the methodology for proffered expert testimony: (1) whether the opinion at issue can be tested; (2) whether it has been peer-reviewed; (3) the rate of known or potential error; and (4) general acceptance within the scientific community. *Daubert*, 509 U.S. at 593-94. *See also Bitler v. A.O. Smith Corp.*, 400 F.3d 1227, 1233 (10th Cir. 2004). This list is not exclusive, and trial courts retain broad discretion to consider other factors. *Dodge v. Cotter Corp.*, 328 F.3d 1212, 1222 (10th Cir. 2003) (*citing Kumho*).

An expert's testimony may be excluded where it is based on subjective beliefs or unsupported speculation which is no more than *ipse dixit* guesswork.

Gen. Elec. Co. v. Joiner, 522 U.S. 136, 146 (1997) (holding that a trial court may properly exclude *ipse dixit* opinions where "there is simply too great an analytical gap between the data and the opinion proffered").

It is critical that the district court determine whether the evidence is grounded in science and based on actual knowledge, as distinct from "subjective belief or unsupported speculation." *Dodge,* 328 F.3d at 1222. "Regardless of the specific factors at issue, the purpose of the *Daubert* inquiry is always to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Id.* at 1222-23 (*quoting Kumho*, 526 U.S. at 152).

The second prong of the *Daubert* inquiry concerns relevancy or "fit." The trial court must conduct inquiry into whether proposed testimony is sufficiently "relevant to the task at hand." *Bitler*, 400 F.3d at 1234 (*quoting Daubert,* 509 U.S. at 597). A trial court must look at the logical relationship between the evidence proffered and the material issue that evidence is supposed to support to determine if it advances the purpose of aiding the trier of fact. *Id*. at 1234. "Even if an expert's proffered evidence is scientifically valid and follows appropriately reliable methodologies, it might not have sufficient bearing on the issue at hand to warrant a determination that it has relevant 'fit'." *Id.*

As this Court explained in *City of Tulsa v. Tyson Foods, Inc.*, 2003 WL 26098561 (N.D.Okla. March 13, 2003):

> *Daubert* requires that the district court undertake an inquiry into the reliability of scientific evidence under Federal Rules of Evidence 702 and 703 to determine its scientific validity. *See Daubert*, 509 U.S. at 589–90. Rule 702 provides that, "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue" an expert "may testify thereto...." Fed.R.Evid. 702.

Id. at *1.

Daubert makes clear that the trial judge serves as a "gatekeeper" in assessing the validity of expert testimony. Thus, admissibility under Rule 702 is governed by Rule 104(e), which requires the judge to conduct preliminary fact-finding, and make a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientific. To qualify as scientific evidence, the "[p]roposed testimony must be supported by appropriate validation ..." *Daubert*, 509 U.S. at 590. "[T]he requirement that an expert's testimony pertain to 'scientific knowledge' establishes a standard of evidentiary reliability." *Id.* Evidentiary reliability is based upon the scientific validity of the expert's opinion.

Rule 702(b) requires the expert's opinion to be based on "sufficient facts and data." However, in fulfilling its gatekeeper function, the court assesses only the sufficiency, not the quality, of the underlying data supporting an expert's opinion. *See*, *U.S. v. Lauder*, 409 F.3d 1254, 1264 (10th Cir. 2005) ("By its terms, the *Daubert* opinion applies only to the *qualifications of an expert and the methodology or reasoning used* to render an expert opinion" and "generally does not, however, regulate the underlying facts or data that an expert relies on when forming her opinion.") (citing *Daubert*, 509 U.S. at 592-93) (emphasis

added). In assessing the sufficiency of the facts, the trial court should conduct "a quantitative rather than qualitative analysis." Fed.R.Evid. 702 Advisory Committee Note to 2000 Amendments. As another district court has held, "the Court does not examine whether the facts obtained by the witness are themselves reliable – whether the facts used are qualitatively reliable is a question of the *weight* to be given the opinion by the factfinder, not the *admissibility* of the opinion." *U.S. v. Crabbe*, 556 F.Supp.2d 1217, 1223 (D.Colo. 2008) (emphasis in original). Accordingly, the trial court should limit its inquiry under Rule 702(b) to "whether the witness obtained the amount of data that the methodology itself demands." *Id.*

III
BLOOMFIELD'S BACKGROUND/QUALIFICATIONS

Bloomfield holds a bachelor's degree in Industrial and Systems Engineering from Georgia Institute of Technology. He is President and owner of Bloomfield Research & Development ("BR&D").[2] He claims to hold eight patents in electronics, robotics and avionics.[3] [Dkt. No. 52-6, ¶5]. Bloomfield says he is an expert in:

> avionics, aircraft electrical systems, aircraft electrical distribution, avionics integration, trim systems, autopilot systems, auto-throttle

[2] The status of BR&D is unclear to the undersigned. Bloomfield's curriculum vitae [Dkt. No. 52-6, Appendix "A"] refers to BR&D in the present tense and states that the firm "invents, develops, designs and builds prototypes of 'leading edge' technology products and systems." [*Id.*]. However, in his deposition, Bloomfield testified that he "disbanded" the company "a good 18 years ago." [Dkt. No. 52-9, at 42:11-14]. Thus, it appears the company was disbanded in 1998.

[3] However, in his curriculum vitae, Bloomfield claims he holds "12 US patents." [Dkt. No. 52-6, Appx. "A", p. 1].

> systems, Global Positioning Systems ("GPS"), Cockpit Voice Recorders ("CVR"), Full Authority Digital Engine Control ("FADEC"), Flight Data Recorders ("FDR"), and Traffic Collision Avoidance Systems ("TCAS"). In addition, I am an expert in all electro/mechanical systems and hydro/mechanical systems and sub-systems.

[Dkt. No. 52-6, at 4].

Bloomfield is a private pilot with a current certification and is in progress to obtain an instrument certification. He owns and flies a Cherokee 180 D, a single-engine, four-seat, propeller-driven plane. [*Id.*]. He received his pilot's license when he was 16 years old and has accumulated 500 hours as a pilot. [Dkt. No. 52-9, at 22-23]. He has never flown a Premier, or any other, jet airplane. [*Id.*, at 23]. He has consulted and/or testified in hundreds of airplane-related lawsuits. [Dkt. No. 52-6, Appx. "B"].

Bloomfield is not a Registered Professional Engineer, does not hold an Federal Aviation Administration ("FAA") Inspection Authorization and is not an A&P mechanic. [Dkt. No. 52-9, at 22-24.] He has experience with the FAA in getting airplane electrical systems certified. [*Id.*, at 46].

IV
DISCUSSION

A. Unreliability of Bloomfield's opinions due to multiple errors

Defendants argue that Bloomfield's testimony should be limited or excluded because errors in his expert report render his opinion unreliable.

[Dkt. No. 52, at 6-11]. Bloomfield made a number of significant corrections to his opinions/testimony during his deposition[4]:

1. He corrected his opinion that a loose wire to the pilot's essential bus existed from the time the plane was manufactured and that in performing a subsequent Service Bulletin, the wire would not have been touched. At his deposition, he admitted that he was wrong and that the Service Bulletin kit drawing made it clear that the wire had to be removed in order to complete the work. [Dkt. No. 52-9, at 73-76, 89-91].

2. As a result of his first correction, Bloomfield testified that the electrical components whose failure he attributed to the loose wire might have pre-dated the Service Bulletin work and would not have been caused by the loose wire. Therefore, he would have to "rethink on the reason [a component] was replaced," if it was replaced prior to the Service Bulletin work. [*Id.*, at 149-156].

3. At his deposition, Bloomfield testified that the Cockpit Voice Recorder ("CVR") was powered by the pilot's essential bus. [*Id.*, at 251]. Bloomfield stated that the only reason the CVR stopped working for eight seconds was because it was not receiving sufficient voltage or current by the pilot's essential bus. [*Id*, at 249-251]. However, after a break, Bloomfield testified that he "misspoke" because the CVR is on the *co-pilot's* essential bus, not the pilot's. [*Id.*, at 253-55].

4. According to Defendants, Bloomfield wrongly opined that the battery switch was in the ON position at impact, not STANDBY, [Dkt. No. 52-6, at ¶ 30], because he wrongly assumed that photographs of the battery switch were taken when the plane wreckage was found. The photos were actually taken about two months later.

5. Defendants assert that Bloomfield wrongly opined that the force required to deploy the alternate landing gear system was 200-300 percent greater than that listed in the design specification. [*Id.*, at ¶34]. Defendants

[4] Defendants did not attach the full deposition transcript as an exhibit to their motion, only selected pages. Plaintiffs supplied only a few additional deposition pages in their response.

> contend this was based on an erroneous belief that "Beech's design specification call for a maximum pull force of 25 pounds to release the nose gear" instead of the 64 pounds provided in the Maintenance Manual. [Dkt. No. 133-1, at 274-284].

Plaintiffs contend that, as a matter of law, these errors do not render Bloomfield's testimony inadmissible. Plaintiffs say that Bloomfield admitted Errors Nos. 1 and 2 and will not offer any such testimony/opinions at trial. [Dkt. No. 116, at 10]. Therefore, Defendants' Motion to Exclude is **MOOT** as to these two items.

Plaintiffs argue that Bloomfield merely misspoke at his deposition [Error No. 3] and that this is not grounds to strike his opinions. As to Errors Nos. 4 & 5, Plaintiffs contend these issues go to the weight of testimony as evaluated by the jury, not its admissibility as determined by the Court. [*Id.*]. The Court agrees that these are matters of the weight to be given to Bloomfield's testimony. Bloomfield admitted that his original opinions about the loose wire to the pilot's essential bus, the impact of the Service Bulletin and the effect on certain electrical components were wrong. He corrected/clarified those opinions at his deposition as he was required to do by the Federal Rules of Civil Procedure. *See*, Fed.R.Civ.P. 26(e). The remaining errors go to the weight to be afforded Bloomfield's opinions, not their admissibility, and should not be stricken on this basis.

B. Sufficiency of Bloomfield's Data[5]

Defendants complain that in formulating his opinions, Bloomfield relied on "faulty logic, *ipse dixit*, and post-hoc-ergo-propter-hoc reasoning" without considering the relevant facts and data. [Dkt. No. 52, at 11-18]. For example, Bloomfield opined that the failure of a number of electrical components on the Premier was caused by a loose wire to the pilot's essential bus. Bloomfield amended his opinion at his deposition and admitted that he would have to "rethink" the causal connection between the loose wire and the electrical components because many of the component issues may have pre-dated the loose wire. Bloomfield did no testing of the components and has no basis for his opinion; consequently, I recommend that Bloomfield be precluded from offering any testimony as to problems with, or the cause of problems with, the various electrical components cited in his expert report [Dkt. No. 52-6, ¶ 27].

Defendants also complain that Bloomfield did no testing regarding the "voltage spikes" he claims the loose bus wire would have caused.

> Q: Did you conduct any type of testing or conduct any measurements of the inductive measurements of this connection?
> A: That, I can't answer that question because you are going to give me voltages. You are going to have to give me current. Oh, I didn't – if you want to just couch it as doing electrical testing?
> Q: Yes.
> A: And just drop the inductance part, because that confuses it, no, **I did not do any electrical testing**.

[5] Plaintiffs frequently rely on statements made by Bloomfield in an Affidavit executed July 12, 2016. [Dkt. No. 116-1, at 1-18]. The undersigned has previously held that this Affidavit is improper supplementation [Dkt. Nos. 182 & 183] and will not be considered to bolster the opinions in Bloomfield's expert report. *See*, *supra*.

[Dkt. No. 52-9, at 98-99 (emphasis added)].

Later, Bloomfield testified:

> A: But I will clear this up. Let us drop the capacitance part, because that is not suitable to what you are asking me. Let us drop the inductance part, because that is not suitable to what you are asking me.
>
> **If you are asking me if I did any electrical testing on this conduction, no, I did not**.

[*Id.*, at 99-100 (emphasis added)].

> Q: What evidence is there that there were voltage spikes in this airplane?
> A: I don't have evidence that there were voltage spikes, but I know a hundred percent that there were voltage spikes because I do know with this loose connection there were periods that you did not have any, albeit maybe a millisecond or ten milliseconds, that you did not have any connection. So you make the connection, you break it. Things that are depending on that electrical energy will produce spikes….

[Dkt. No. 52-9, at 141-42]

Bloomfield's improper Supplemental Report sought to provide a basis for this and other opinions. For example, in his Supplemental material, Bloomfield discussed Ohm's Law at great length[6], *see,* Dkt. No. 116-1, at ¶ 11, 24-26, & 30; however, Ohm's Law is not discussed at all in Bloomfield's original report, and was not mentioned in the deposition pages provided to the

[6] Ohm's law provides: "E or V (voltage) = I (current) X R (resistance)." *See, for example*, http://www.pa.msu.edu/courses/2014spring/PHY252/Lab2.pdf. However, Bloomfield admitted at his deposition that he did no measurements or calculations using Ohm's Law or any other formula.

Court.[7] Without any measurements of calculations to determine the *relevance* or *extent of the applicability* of Ohm's Law to the Subject crash, Bloomfield's opinion is nothing more than *ipse dixit* testimony.

> Q: What evidence can you point to that indicates the boost pump, either boost pump on this airplane created the spike?
> A: I know they had to. I know they had to have created a spike in the system, because again if you make/break an electrical connection that is servicing a pump or a solenoid, you will get a spike.

[Dkt. No. 52-9, at 142-143].

> Q: I am asking if there is any physical evidence that you can point to that the boost pumps created voltage spikes? Is there something that you can point to?
> A: No, because the voltage spike is not going to leave any evidence on the pump itself. The creator of the spike in the solenoid coil or the pump itself, they create the spikes. The spikes cause havoc in the system in other more sensitive areas, in the avionics and things like that. The boost pump and the solenoid are much more robust, and not only are they the creator of the spike, but they can suffer what the spike delivers versus more sensitive electronics.

[*Id.*, at 143].

Bloomfield had no physical evidence to support his opinions and admitted he had not performed any calculations to support them either.

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[7] One of the papers that Bloomfield cites in his expert report – William J. Meese and Robert W. Beausoliel, "Exploratory Study of Glowing Electrical Connections," [U.S. Dept. of Commerce 1977] – does cite Ohm's Law in the course of explaining the differences between "glow behavior" in electrical connections and "arcing/sparking" in circuits. [Dkt. No. 52-6, Appendix "E", at ¶ 3.2.5(b) ("In tight, well-made electrical connections, as well as in wire and other conducting components of electrical circuits, voltage drop will vary (substantially) directly with current. This is because resistance is substantially constant (**E=IR**).") (emphasis added)]. The paper sets forth measurements and calculations supporting its premise. *Id.*, at Table 1. However, there is no record evidence that Bloomfield did any similar calculations using Ohm's Law in fashioning the opinions set forth in his expert report.

> Q: Did you prepare any calculations or measurements to show that there were voltage spikes experienced by this aircraft?
> A: Again, I will say it, I will guarantee you there are, because a connection repeatedly that services solenoid or a pump, the results (sic) is going to be a spike, a hundred percent of the time.

[*Id.*, at 143-44].

Bloomfield should be precluded from testifying about voltage spikes in the electrical system of the Premier jet because his opinion is unreliable: he obtained no physical evidence to support his hypothesis, took no measurements and did no calculations. Absent such evidence, we are left with an expert's *ipse dixit* guesswork – insufficient as a matter of law. *Joiner*, 522 U.S. at 146. Plaintiffs argue that Bloomfield is testifying on the basis of his experience and knowledge, as opposed to scientific testing. But *Kumho* teaches that in performing its gatekeeper function, a court must "make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho*, 526 U.S. at 152. Bloomfield has not met that standard.

Defendants also contend that Bloomfield did no testing to support his opinion that the alternate landing gear system "suffers a design defect, in that a major component of the mechanical system resides in an unprotected hostile environment, (wheel well) allowing foreign debris to contaminate a system that enjoys no tolerance…." [Dkt. No. 52, at 15 (*citing* Bloomfield's report, Dkt. No. 52-6, at ¶ 46C)]. Bloomfield testified he is not a design expert:

Q: One of the issues in this case involves the landing gear of an airplane, is that correct.
A: Correct.
Q: Have you ever worked on the design of the landing gear of an airplane?
A: No.
Q: One of the systems that you have criticized in this case is the alternate or emergency gear extension system, as I you're your report.
Have you ever worked on the design of an alternate gear extension system on an airplane?
A: No.

[Dkt. No. 52-9, at 44].

Bloomfield has no specific professional expertise in the design of an alternate landing gear system. Furthermore, while he offers the opinion that design of the Premier's alternate landing gear system is flawed because it allows debris to enter the wheel well, he does not link this opinion to any issue in the case. He offers no opinion that debris, in fact, collected in the wheel well and caused a malfunction of the alternate landing gear system, or contributed in any way to the airplane's crash. Therefore, Bloomfield should be precluded from offering any opinion as to the alleged design flaw of the alternate landing gear system regarding the wheel well of the plane.

Defendants object to Bloomfield's opinion that the Airplane Flight Manual ("AFM") or Pilot's Operating Manual ("POM") should have included instructions as to the distance one must pull the alternate landing gear handle in order to deploy the landing gear. [Dkt. No. 52-6, at ¶ 37]. They further object to his opinion that the system should have had an indicator showing when the landing gear was fully deployed. [*Id.*, at ¶ 38]. Plaintiffs counter that Bloomfield's opinions in this regard are based on his experience and knowledge

as a pilot and an engineer, and that a formal test procedure is not required. [Dkt. No. 116, at 17]. The Court disagrees. Bloomfield's experience as a pilot is limited to single-engine, prop-driven aircraft. He may testify as to the pull force testing that he assisted in, but should be precluded from offering opinions as to design of the landing gear system.

C. Bloomfield's Methodology

There are other reasons for limiting Bloomfield's expert testimony. Defendants contend that Bloomfield's testing was insufficient, unreliable and irrelevant to the issues in the case. [Dkt. No. 52, at 18-22]. Specifically, Defendants contend that `Bloomfield's "thermal study" of the pilot's essential bus is irrelevant to any issue in the case. Bloomfield conducted a test applying a heat gun to a screw and torque putty on an exemplar circuit breaker panel. Bloomfield said this procedure would "determine the behavior and 'color retention' attributes of the F900 Torque Putty" which was used in the Premier circuit breaker panel. [Dkt. No. 52-6, at ¶ 20]. Bloomfield found that to achieve the "charcoalization and color change" as shown in his test required seven minutes. [*Id.*]. Bloomfield concluded that under the circumstances, "it would be impossible for the Essential Bus connection to be in this found state due to any activity or event post crash. This screw was 'loose' from the original assembly."[8] [*Id.*]. Bloomfield may testify as to the change in color of the wire's insulation when heat is applied.

[8] At his deposition, Bloomfield conceded that he was wrong about the wire being loose from the "original assembly," because the wire was removed on June 19, 2009, to complete work pursuant to Beechcraft Service Bulletin 24-

Bloomfield's opinions regarding intermittent power to the plane's essential functions flow from the following:

1. On February 24, 2015, Bloomfield examined the wreckage of the Premier jet at St. Peter's Aircraft Recovery in Wright City, Missouri. There, Bloomfield discovered a loose screw connecting the "service or feed wire to the Essential Bus on the Pilot's side." [Dkt. No. 52-6, ¶¶ 16-18].
2. The service or feed wire was the color "blue/purple," the "classic sign of continuous overheating." [*Id.*, ¶ 18].
3. Thereafter, Bloomfield conducted a "thermal study to determine the behavior and 'color retention' attributes of the F900 Torque Putty" used in the Premier's breaker panel. [*Id.*, ¶20]. Using a heat gun, the thermal study established that it took seven minutes to achieve the "charcoalization" and color change to blue/purple. From this Bloomfield concluded that the screw in question had been loose from the time of the plane's original assembly. [*Id.*].[9]
4. Bloomfield also conducted a "washer torque versus mechanical signature" test on washers identical to those used on the Premier breaker panel. [*Id.*, ¶ 21]. Bloomfield stated that this study "clearly

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3868. Bloomfield's report stated that the loose wire "was not touched … or tampered with" in completing the Service Bulletin. [*Id.*, at ¶ 22]. At his deposition, he admitted this was wrong. [Dkt. No. 52-9, at 73-75, 90-91]. His amended opinion was that the wire was loose from the time of the Service Bulletin work. [Dkt. No 52-9, at 150:6-10].

[9] Bloomfield subsequently corrected his opinion as to when the loose wire occurred. *See* n.7, *supra*.

> shows that the 'loose' screw was never tightened from initial assembly." [*Id.*].[10]

From this, Bloomfield concluded that the loose wire could cause "downstream electrical problems," unreliable performance, "intermittency," and voltage spikes. [*Id.*, ¶¶24-25]. As proof of his opinion, Bloomfield pointed to a lengthy list of devices and apparatuses on the Pilot side of the Essential Bus that he contended suffered "undependable functional performance" as a result of electrical intermittency. [*Id.*, ¶24]. Bloomfield opined:

> There exists more engineering certainty than naught that the very high rate of failing electrical devices and apparatuses are due to the manufacturing defect of the "loose" connection at the service/feed wire and the resulting voltage spikes contaminating the entire electrical system. That is the only common culprit.

[Dkt. No. 52-6, ¶28].

However, Bloomfield had to largely recant this alleged cause-effect connection at his deposition. [Dkt. No. 52-9, at 150-175]. He concluded that the loose connection could cause voltage spikes up to 100 volts "that would have detrimental effects on every electrical devices (sic) and apparatuses (sic) in the aircraft's system." [*Id.*, ¶41-42]. Because of this, Bloomfield says, Pilot Caves was unable to restart his engines after the dual shutdown and the plane crashed.

Defendants contend that because Bloomfield did no electrical testing to support his opinion that the essential bus provided only intermittent power to various components of the Premier jet, [Dkt. No. 52-9, at 92], his opinion lacks

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[10] This opinion was also corrected. *See*, n.7, *supra*.

sufficient factual basis. In response, Plaintiffs argue that Bloomfield's opinions are "based upon known electrical and scientific principles that do not require testing to pass *Daubert* muster." [Dkt. No. 116, at 20]. The fundamental principles relied on by Plaintiffs are not discussed in Bloomfield's expert report. Rather, this discussion is set forth in Bloomfield's Affidavit in support of his response to Defendants' motion. [Dkt. No. 116-1]. This Court has already held that this Affidavit constitutes improper expert supplementation [Dkt. No. 182 & 183] and cannot be used to bolster and provide a foundation for opinions that should have been set forth in the original Rule 26 Expert Report.

The Court concludes that Bloomfield lacks sufficient facts/data to support his opinions that the loose screw/wire caused electrical problems ultimately resulting in the crash of the Premier jet. Bloomfield did no electrical testing. He did nothing to verify whether the Premier jet suffered from electrical voltage spikes. He did nothing to test his hypothesis that certain electrical devices and apparatuses failed due to voltage spikes. Thus, his conclusions in this regard amount to nothing more than *ipse dixit* guesswork.

Defendants also argue that the testing of the pull force required to deploy the alternate landing gear system was "haphazard" and artificially inflated the result. [Dkt. No. 52, at 18]. Bloomfield and expert Don Sommer conducted testing to determine the pull force required to deploy the landing gear on the Premier jet using the alternate landing gear system. [Dkt. No. 52-6, ¶¶ 32-34]. For the reasons set forth in this Court's Report and Recommendation concerning the expert report and testimony of Don Sommer, the motion should

be denied in this regard. Questions as to the manner in which Bloomfield and Sommer conducted this test go to the weight to be afforded such evidence, not its admissibility.

D. Opinions on Piloting Issues, Aircraft Manuals and Landing Gear Design

Finally, Defendants argue that Bloomfield lacks the qualifications to give opinions on piloting issues, preparation of aircraft manuals or the design of landing gear systems. [Dkt. No. 52, at 22-24]. Bloomfield testified that he is not being offered as an expert on piloting issues. [Dkt. No. 52-9, at 331:18-23]. Therefore, he should be precluded from testifying as to how Pilot Caves acted or how any pilot might respond to various flight scenarios.

Bloomfield also testified that he has no experience in designing landing gear systems. [*Id.*, at 44]. Bloomfield may testify as to the pull force testing he assisted with on the Premier's alternate landing gear system, but should be precluded from offering expert opinions as to design of the landing gear system.

Defendants object that Bloomfield has no background to offer opinions as to the adequacy of the Aircraft Flight Manual or Pilot's Operating Manual. Bloomfield is certified to fly a single-engine, prop-driven aircraft. He has never flown a jet. Bloomfield has no demonstrable expertise in assessing the adequacy of AFMs or POMs. Furthermore, Plaintiff's experts Don Sommer and Michael Haider have also been offered as experts on this issue and have superior qualification to testify in this regard. Any additional testimony from Bloomfield would be cumulative.

V
SUMMARY

For the reasons set forth above, I **RECOMMEND** that Defendants' Motion to Limit/Exclude Bloomfield's testimony be **GRANTED IN PART AND DENIED IN PART**. I recommend that Bloomfield be precluded from offering expert testimony regarding the loose wire in the Pilot's Essential Bus causing voltage spikes, intermittency, and, ultimately, the crash at issue. He should also be precluded from offering testimony as to the design of the Alternate Landing Gear System and the adequacy of the Aircraft Flight Manual. I recommend that he be allowed to testify about finding the loose wire in the Pilot's Essential Bus and the results of the thermal test and washer torque test that he conducted, and that he be allowed to testify as to the pull force testing that he and Sommer conducted.

OBJECTIONS

The District Judge assigned to this case will conduct a de novo review of the record and determine whether to adopt or revise this Report and Recommendation or whether to recommit the matter to the undersigned. As part of his/her review of the record, the District Judge will consider the parties' written objections to this Report and Recommendation. A party wishing to file objections to this Report and Recommendation must do so by **December 13, 2016**. *See* 28 U.S.C. § 636(b)(1) and Fed.R.Civ.P. 72(b). The failure to file written objections to this Report and Recommendation may bar the party failing to object from appealing any of the factual or legal findings in this Report and Recommendation that are accepted or adopted by the District

Court. *See Moore v. U.S.*, 950 F.2d 656 (10th Cir. 1991); and *Talley v. Hesse*, 91 F.3d 1411, 1412-13 (10th Cir. 1996).

DATED this 29th day of November, 2016.

Paul J. Cleary
United States Magistrate Judge